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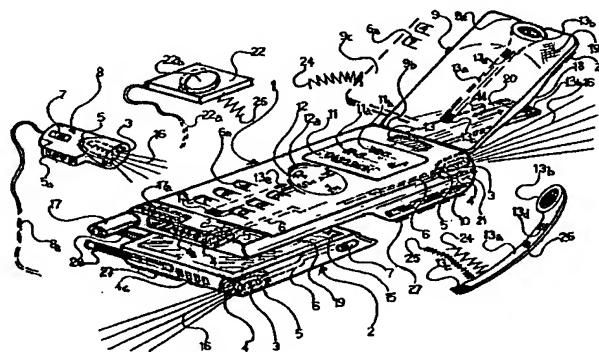
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(57) Abstract: Mobile phone such as of cellular or household cordless or receiver-transmitter apparatus including some improving functions supplied by its inside circuit/software or by means sensors and specific devices to be placed fixed in suitable vans-cavities-slots provided on the phone/batter or external connected fixed or by cable to said vans which include the connections with the phone circuit; one open van is featured suitable to contain a light bulb like the pocket torches with connections for its powering; other provided improving elements and functions are the compass, the barometer-altimeter, the hygrometer, the parts generating radiated energy placed towards the side opposite to the earphone, the earphone on the flip, the radioconnected unookable flip, the emission of a sound like siren or a particular radio frequency, the flip of transparent material with magnifying function, the function of direct remote control for the car and for the house, the reader of the blood pressure and of the cardiofrequency or electrocardiogram, the stethoscope, the thermometer, the earphone-microphone placed on a removable flip or on a pullable out/reinsertable radioconnected with the phone stylus shaped device, the function of noiseless personal alarm clock, the scanner, the phone/wind speed measurement, the intercommunicating function between stylus and phone on two channels, the phone radioconnection between phone and eyeglasses, the fire alarm, the photocamera connected with the phone having magnifying function, the battery charger incorporated, the microwaves generator plus oven the infrared alarm apparatus, the heating device, the ultrasonics generator, the radioconnected object for calling the dog with the phone, the mobile phone with scanner and fax, the tuner, the mobile phone including the above said improving elements of the invention place in a PC/note book/pad.

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DESCRIPTION of the patent application for industrial invention of title:

"MOBILE PHONE WITH IMPROVEMENTS"

The present invention relates to a mobile phone ,such as of cellular type or household cordless linked to the fixed telephone network or such as a receiving-transmitting set,including one or more opening-vans-cavities opened to the outside and suitable to contain solidarized in it a light bulb/lamp suitable to provide a significant flood light as much as that produced by the normal pocket torches, and
5 powered by the battery which powers the said mobile phone or some sensors/sensing elements or some accessory devices; said van is realized in the body phone structure or in that of its powering battery ;said van-cavity is provided with electric contacts for powering the bulb and the sensors and the accessories and for the connection of them with the inside circuit/software of the phone;the phone is provided with connections and keys/controls,for turning on and regulating,contained in the
10 bodyphone or in the battery.

Moreover the present invention comprises other devices and particular phone structure features and improving functions included inside the phone or obtained by external accessory devices/sensors to be connected by means the vans-cavities to the phone and to its circuit/software both fixed solidarized to the body phone or by wire ,such as the placing of the antenna and of the parts which generate radiated
15 energy at the lower part of the phone, the function of altimeter-hygrometer-barometer-termometer,the compass,the laser beam emission, the presence of a mirror i.e for ladies,a traditional pen to write ,the possible presence of a little external torch fitted to be positionned attached to the above cited van-cavity of the phone wich acts as powering source and as connection point with the inside phone circuit;the siren-alarm,the earphone placed on the flip,the particular light and sound emission in case
20 of emergency;the self putting in action of this particular sound and light on external call,the flip made of transparent plastic material having function of magnifying glass, the function of direct remote control for the car and for the one's own house,the blood pressure and cardiofrequency reader,the stethoscope,the emission of heat from the battery or from body phone,the earphone and microphone placed on a flip also removable from the body phone,the earphone and microphone placed in one or
25 more single stylus shaped device to be pulled out from an own van in the body phone and to be hanged on the ear, the function of personal noiseless alarm, the surface of the phone provided with photovoltaic cells and with a transparent bag,the microwaves based heating device ,the phone function included in a PC-note book wich comprises the innovative functions provided by the present invention,the inside scanner with telefax,the infrared radiation based alarm,the battery charger
30 included in the phone,the speed phone/wind detecting device,the intercommunication function between

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an external radioconnected device with microphone and earphone and the bodyphone, the detecting sensor for polluted air , the eyeglasses radioconnected with the phone, the phone with photocamera having magnifying function and the possibility to take pictures in the darkness, the ultrasonic generator device, the tuner, the electronic card with software placed in a slot.

- 5 The mobile phone like cellular and also the household cordless or a receiver-transmitter apparatus remains normally with its owner or in the vicinity of him; often the person which owns the phone can be in a situation of darkness in which he needs a source of light of entity similar to that obtainable by the little normal electric torches , i.e. for opening a door , to look for an object, during a walk, or in many other situations; these demands and problems of occasional lighting can be solved by the phone
10 of the present invention which is provided with a van-cavity suitable to contain a light bulb strong enough to emit a useful flood/beam of light and in which is contained solidarized fixed said light bulb.

The light bulbs for little torches are such of reduced dimension that its placing in the structure of the body mobile phone or in its battery requires the presence of a van-cavity having not more than some
15 millimeters of width and depth , obviously opened towards the outside of the phone to permit the passing of the light flood so its technical realisation, even in the reduced dimensions of the cellular telephones, is not a problem.

Furthermore frequently happens to have the need to know the weather forecasts or the altitude level at which the person stay or the temperature level both external and of the human body, or to have necessity
20 of orientation and of personal safety and also informations about the level of blood pressure and heart frequency and necessity to have the heart ausculted.

Not less important is the need to minimize the radiated energy in the direction of the user's head,in fact many people make use of the mobile phone for a long time;sometimes there could be the need to have at one's disposal a little mirror,i.e. for ladies, or a little traditional pen to write, and also the need
25 to make use of the phone as direct remote control for the house and for the car, or to have available a only personal noiseless alarm clock without disturbing the other person ,or to have the need to read very little letters in a newspaper without having at ready disposal the glasses, or to communicate with the phone and also works at the PC hands free,or to have always easily available an alarm to detect the presence of people,or to have included in the phone the battery charger,or to have an heating element
30 i.e. to heat foot or heat the hands being in particular situations ,or to have the emission of laser beam for special communications/data transfer,or to have the need to magnify a text or an image,or to have the need of an intercommunication function between phone and an accessory device in order to hear what happens in an other room or for calling a dog but maintaining continuously the connection with the phone network,or to have the possibility to charge the battery by included photovoltaic cells, and of
35 course or to have one or more van/socket/slot on the phone/battery connected with the internal phone circuit in which to insert the necessary sensors or the external accessory devices or an electronic card

including additional software/programs related to the innovations of the present invention, or to have also the flip with the keyboard included and unookable to communicate away from the other phone semipart including the antenna, or the sliding cover flip moving upwards with earphone and microphone and also unookable and radiocconnected with the phone, or a stylus shaped device pullable

- 5 out from a cavity in the phone to be hanged at the ear and containing the earphone and microphone plus a radioreceiver transmitter device so maintaining the communication with the phone and so giving the person the possibility to communicate hands free and far from the phone and moreover more stylus device can be provided to give more persons the possibility to contemporary speak toghester using the same basic phone, or the stylus shaped radiocommunicating device included in the eyglasses so the
- 10 person speak hands free, or the scanner to read text/images and included or linked to the phone and the scanner/telefax placed inside the structure of a PC/note book with phone or at the normal external van-cavity-socket present on it which can also works as an battery power electric outlet, or a fire alarm with relative sensor and alarm program included, or an ultrasonic device to repell insects and to call the dog, or the phone/wind speed measurement i.e during a walk or in a boat trip, or the function to detect
- 15 the pollution of the air with relative sensors and alarm beeing in particular situation or in dangerous areas i.e with children, or a tuner for musicians.

The above further needs can be achieved thanks to the telephone like the present invention since it is provided equipped with vans/cavities/socket/slots electrically connected with the inside circuit for placing in them the suitable sensors/devices and with suitable fumctions/programs included in the

- 20 electronic circuit/software of the phone and with other external accessory devices/sensors to be connected fixed or by wire to the body phone trough the external van/cavities electrically connected with the phone circuit/software and with some phone parts particularly featured and located in the body phone and eventually with electronic cards to be inserted in a suitable slot in the phone to provide additional software/program.

- 25 As concerns the prior art it is not known the presence in mobile phones, cordless, transmitting-receiving set of a light bulb suitable to produce a significative illumination, from one to ten meters approx. and placed fixed in the structure of a mobile body phone, while is known the bulb placed in the battery; it is not known the presence in mobile phones of the above mentioned others improving elements/functions of this invention, like the barometer, the compass, the particular external accessory torch, the thermometer, some of the particular structure features to reduce the radiate energy towards the head, the hygrometer, the laser beam emission, other functions for personal safety and health, the battery charger included in the body phone, the infrared radiation based detector/apparatus, the removable radiocommunicating stylus/flip including the earphone-microphone pullable out from the body phone, the tuner, the innovations of the present invention included in a PC/note book equipped
- 30 with telephone, and so on like provided by the invention and below described and claimed.

- Obviously the mobile phones, particularly of cellular type, have an external van in which is normally placed the connector/plug with proper wire for recharging the battery and for other functions and other devices, i.e. wire with earphone-microfone, but it is not arranged/manufactured to contain fixed/solidarized a light bulb; of course it can be used to fix on it an external accessory torch, this
- 5 torch can be also fixed externally on the battery at the point of it which there are the electrical contacts for its recharging; this van/socket normally present at the bottom of the mobile phones can suitably used to fix at it the sensors and other devices provided by the present invention so connecting them to the internal circuit/software of the phone; moreover it can be easily adapted to contain the bulb.
- 10 The capacity of the todays batteries is so high that an occasional use of the light bulb for lighting doesn't reduce the efficiency of the battery, and furthermore there is frequently the sparebattery. The single battery can be also used as powering source for an electric torch suitably made for this purpose, to be connected fixed or by wire at the electric outlet of the battery.
- In the mobile phones is it frequently possible to find some little lighting indicators (Led) useful for to
- 15 show the functioning operations during the use of the phone and for display lighting to read the figures or the numbers, but they don't have absolutely a lighting power to the outside similar to the electric pocket torches for which it is necessary a real light bulb/lamp.
- The invention will be now better described referring to some examples of possible embodiments shown as an indicating but not restrictive way in the enclosed drawing in which the Fig.1 is a
- 20 perspective view of the mobile phone with its battery and in which there are indicated the elements of the present invention.
- In Fig 1 is shown the telephone 1 in the structure of which a van/cavity/socket 4 or 4a, when it is like/similar to the type normally present at the bottom of cellular phones, is obtained and featured to contain a bulb/lamp 3 and where can be also placed the external sensors and the external accessory
- 25 devices necessary to provide the innovative functions of the present invention; in this van-cavity there are the electrical contacts/socket 5 to which the light bulb 3 or the sensors or the accessory devices will be connected; said contacts/socket in the van/cavity/socket can have function of electric outlet being powered by means of the battery 2 and function of powering/ connection/interacting point between the external accessories/sensors and the internal electric/electronic/software circuit of the phone, so
- 30 permitting the turning on and off and the control of the functions by means of the key boards 6a located externally on the phone or located on the external devices.
- The light bulb/lamp 3 is featured like the various types to be found on the market, such as halogen or incandescence type or so called kripton already chosen for the little and medium sized common pocket torches; it will be powered by the electricity of the battery 2 of the phone 1, otherwise the output
- 35 voltage will be adapted to that of the more common bulbs on the market by the circuit of the phone 1.

Inside the phone or at the van-cavity 4/4a a device suitable to emit laser beam can be placed, that is to say an emission of coherent light, which can be emitted modulated by means the circuit of the phone, so permitting to have i.e. a special data transfer, moreover said laser beam can be used, by means of the phone suitably equipped, to detect the presence of polluted air.

- 5 From the van 4 opened or openable to the outside the light flood 16, produced by the bulb 3, will spread out; the bulb 3 is replaceable and it is possible remove it from the outside or with a limited opening of a specific part of the body phone 1 or of its battery 2 in order to get to the van 4.

The bulb 3 is solidarized into the van 4, i.e. fixed jointed or screwed or in other way, so it have to be well fixed and its electrical contacts fit together with the contacts 5 in the van 4; this van 4 is so an

- 10 electric outlet of the energy supplied by the battery 2.

The van-cavity containing the bulb/lamp a moving/sliding glass-lens also coloured is placed in order to give an light pointer arrow shaped.

At said van 4, which can be provided both in the phone 1 or in the battery 2, or 4a when will be used the van/socket already normally existing at the bottom of the cellular phones or as 4c if it is together

- 15 the normal electric contacts/socket of the batteries, can be attached a little accessory torch 8 having own lighting bulb 3 but lacking of own battery, said accessory torch 8 has a protuberance 5a which contains the electric contacts; it will be embodied in such way to be suitably fixed on the vans 4 or 4a or on the contacts 4c in so way that his own electric contacts meet those in said vans so enabling the functioning; said torch 8 is also provided with a conductor cable 8a which thanks to its plug/connector 20 links it to the van 4 or 4a or 4c of the battery, which acts as powering supply, so enabling the functioning far from the phone 1 or from the battery 2.

The bulb ignition and its functioning will be obtained thanks to a ignition/regulation switch 7 placed in the phone and/or in the battery or in the external torch 8, or by means of the phone keys 6a and the phone internal circuit.

- 25 Obviously an intermittent lighting of the bulb/lamp 3 located into the phone or that of the external accessory torch 8 can be provided and is very useful in the evening/night, i.e. riding a bike or running on foot along a road, bringing the phone hanged at the belt or on the bike in order to give it the function of personal signalling apparatus.

It is known that the mobile phones emits many radiated energy (electromagnetic waves) which are not

- 30 well tolerated by everybody, so the phone provided by the present invention is equipped with the antenna 17 and the related devices which emit radiate energy in high quantity placed in an opposite position if compared with the earphone for listening, that is to say placed towards the lower extremity of the phone 1 so usefully the radiation is, at the most possible, away from the user's head; the phone like the present invention provides also the antenna 17a placed incorporated in the area of the lower 35 extremity of the phone 1 and preferably in horizontal direction or at least in the lower semipart;

moreover the phone 1 or some parts of it which emits the radiated energy are provided with a radiation shield to minimize this radiation towards the head.

- For this purpose ,that is to say to reduce the radiate energy towards the user's head the present invention provides the earphone 13b placed near the upper edge 9a of the opening/answering flip 9,
- 5 obviously said earphone 13b will be electrically connected with the internal circuit of the phone 1 ; this position of the earphone 13b towards the upper edge of the flip 9 make possible that the antenna ,placed at the most possible towards opposite side ,will be even more away from the user's head, more precisely of a lenght equal to lenght of the flip, wich during the conversation is opened ,plus approximately the lenght of the phone 1, consequently with great efficacy as the radiated energy is
- 40 reduced in square ratio to the distance increasing, for this purpose it also provided that the earphone 13 can be placed at the upper edge of the phone 1 but at the sideways edge 21,that is to say not in the normal/central position ; the phone circuit will be arranged(shielded-filtered) in order to minimize the radiated energy emitted by the circuit of the earphone and related devices emitting radiated energy.
- It should be noted that the invention provides that the earphone 13, which can be placed 13 on the
- 45 body or 13b if on the flip 9, and also the microphone 13c will be both unhookable/removable from the body phone and placed/inserted toghether in a single piece 13a stylus/bar shaped device realized pullable out from a cavity suitably and purposely predisposed in the phone 1 or in its flip 9 or in one of the semiparts that put together a mobile phone, and in said cavity the stylus/bar 13a including earphone and microphone can be replaced; said stylus/bar 13a when taken out from his cavity can be
- 20 hanged up on the ear for hearing and during the conversation interacts/dialogues with the phone 1 by radiowaves 24 thanks an own internal radio receiver-transmitter apparatus selfpowered which interacts/dialogue with the phone 1 thanks to an other similar radioconnector apparatus placed inside in the circuit of the phone 1 or fixed externally on it at the van/socket 4/4a present at the bottom of the mobile phones; said stylus 13a with earphone 13b and microphone 13c is provided with electric
- 25 contacts 13d wich will meet the contacts 13e located in its container cavity made in the phone or flip ,consequently said contacts 13e link said stylus/bar with the internal electric/electronic circuit of the phone,so said stylus 13a can stay active and functionning even if replaced in its container cavity,particularly the microphone and earphone will remain active, and also it recharges its power supply battery.
- 30 Of course the phone 1 when is equipped with the stylus/bar device 13a can also be normally equipped with own normal earphone 13 and microphone 13c fixed included and normally operating when the stylus/bar 13a is outside its container van-cavity ,so a further useful function can be provided by the present invention,in fact the said stylus/bar 13a pullable out from the phone1 is moreover provided enabled to remain radioconnected with the phone1 on a further separate special
- 35 radiochannel/radiofrequency 25 different from the radio frequency 24 used between itself 3a and the phone 1 during a normal phone communication,so between the phone and the stylus device 13a an

intercommunication function is provided and contemporary using the phone the possibility to remain active as normal phone connected to the phone network ; it should be noted now that the user of the phone has the possibility to locate the stylus/bar 13a away from the phone , i.e. in a room where a child is sleeping, and consequently hear the sounds coming from the area close to the stylus/bar 13a

5 ,i.e near a child, and also having the opportunity to make a normal phone call using the phone 1;two stylus/bar devices can be also provided eventually for this purpose to be located into the phone 1.

The stylus/bar device 13a can be equipped with a key/button 26 to switch on/of and to change the channel of connection with the phone 1 according with the chosen function, moreover it can be equipped with a little bell or light alarm to see an arriving call .

10 The stylus /bar radiocommected device 13a can be in number of one but also two.i.e.for stero hearing and also more the two to give more people the possibility to remain radioconnected with the same body phone ·and moreover speaking/communicating contemporary with the phone and between themselves.

15 The stylus bar device 13a cab be usefully also provided made structured as separate object from the phone,not pullable out and replaceble in a cavity in the phone and moreover not including the microphone but only the microphone , that is to say that it has only the receiver radiocircuit, moreover it will be featured suitably to be fixed hanged at the collar of a dog, so it is possible to call and control the dog giving the vocal orders by means of the phone wich remains radioconnected with this modified stylus/bar device 13a.

20 Usefully, as an alternative to the stylus 13a removable it is provided that the flip 9 is unookable/removable 9c and fitted for functionning like said stylus 13a, that is to say that the flip9c will include the microphone 13c ,the earphone 13b,an own power supply battery,a device for hooking and unooking itself from the bodyphone 1 at the edge 9b;in said point of unooking/articulation there will be a device wich permits to maintain active and electrically connected said flip 9c with the

25 internal circuit of the phone; obviously the flip9c will contain the radiowaves receiver-transmitter apparatus suitable to communicate/interact by radowaves 24 with the main body 1 of the phone,usefully until 3-100 meter approximately, and as the mobile phones are today of little dimension it is also provided that said flip could be shaped suitably to be hanged on the ear, alternatively it can be held in the hands; said flip can be suitably equipped with fotovoltaic/solar cells wich can power its battery and

30 the battery of the phone.

This unnokable flip including earphone and microphone can also be provided including the board with the function/control keys 6a to give the user the possibility to make a normal phone call far from the other semipart in which are included the phone components emitting radiated energy like the antenna apparatus 17and other, obviously both semiparts of the phone will include a radio receiver transmitter apparatus to maintain the communication/connection between themselves;so the semipart including the

antenna apparatus can usefully remain separate, i.e in a bag or other room or in a suitcase, that is to say far from the semipart 9c with earphone-microphone-keyboard which is in the hands of the user. It should be noted that the phone1 is alternatively provided with the earphone 13b placed at the top of a mobile bar 20 like stick, also to be placeble on sideways 21, and sliding in both ways 14 ,way in 5 and way out from the phone 1 but remaining electrically connected by suitable runners to the electric circuit of the phone 1; this solution of course provides the increasing of the distance between the user's head and the point of the circuit wich emits the electromagnetic waves, the way in and way out can be automatic and automatized at the beginning of the communication or by specific key action, as there is a driving power ; the earphone placed on the retractable bar will be preferably used in the case of the 10 phone without flip.

It is also provided that there could be a cover shaped element running backwards and forwards on the body phone on suitable metallic ways/runners which maintain the electric connection with the circuit of the phone, this is an already used solution for mobile phones but it has to be noted that in this known solution the sliding cover is equipped with the microphone and slides downwards ,on the contrary in 15 the solution of the present invention the cover is equipped with earphone and slides upwards; practically this cover is like the flip but instead of to rotate it slides upwards and downwards along the upper or rear surface of the phone on ways/runners which maintain the electrical connection with the phone; obviously as the earphone is placed at the upper part of this sliding cover when, at the answering, it moves upwards also the earphone moves in the same direction so usefully away from the 20 area of the phone which emits radiate energy;also this cover/flip will be unhookable/removable from the body phone1 but remaining by radiowaves 24connected with it,in this case equipped in similar way to the stylus 13a and to the flip9,which are unookable and interacting/communicating with the bodyphone 1.

There are various tecnologies available to realize the radiowaves receiver-transmitter apparatuses to be 25 used in the above cited solutions , i.e the so called Home RF wich works at 1-2 Mbit and in a range of 5 meters or the X-10 with low voltage impulse or the WiFi -80.11b wich works at 5-11Mbit/second in a range of 100 mt or the so called Bluetooth wich works on a industrial frequency of 2.4 Ghz and at a speed of 1Mbit.

It should be noted that said above described radiocommunicate stylus/bar device 13a or the unookable flip 30 9c including earphone and microphone gives the possibility to communicates hands free and also away from the phone ,moreover this possibility is very useful seeing video-images on the display of the phone or of a PC/note book/note pad including a phone and contemporary also having a normal wireless phone talk and also far from the bodyphone; it is also important to note that today many mobile phone have the voice calling/dialing function so the above said radioconnected wireless 35 apparatuses became much more advantageous permitting normal phone talks remaining three/one hundred meters far from the bodyphone or the PC/note book including phone.

The mobile phone today keeps company with a lot of people and many are the persons that go to walk to the country or to the mountains, or to the sea, and have demand of orientation, that is to say to know where is the north or the south and other, the present invention provides that an electronic/digital compass is present inside the phone 1 and that the orientation informations supplied by it will be seen

- 5 on the phone display 11. The used tecnology can be similar to that normally used in the wrist watches equipped with similar functions.

The present invention also very usefully provides that inside the phone 1 there is a digital barometer/altimeter/hygrometer with its sensors and electronic circuit for reading and showing the figures/values on the display 11 of the phone 1.

- 10 It should be noted that the phone 1 provides the function of cardiofrequencymeter and of blood pressure measurement(syngomanometer) both detectable by suitable sensors placed on the phone 1; said sensors are connected with the phone circuit/software for the reading of values and for showing them on the phone display 11, i.e. according to known tecnology already present in some wrist watches ; it is also provided the possiblity to connect the plug/cable of a separate electrocardiography
15 apparatus to a van/socket 4 /4a made externally on the phone1 ;the electrocardiography apparatus can be a chest belt also radiolinked to the phone circuit or by means a radioconnector placed at the van-socket 4/4a of the phone1 so the phone is enabled to work as an holter, that is to say ebabled to record the trace of the electrocardiogrpphy for many hours.

- Moreover the phone is provided featured to be connected to a stethoscope for auscultation, the bell
20 plus diaphragm of the stethoscope can be electronically structured having a sound detector/microphone and eventually a powering apparatus to amplify the signal and so on, this means that the sounds of the ausculted organ are converted into electrical pulses which can be transmitted directly by plug and cable or by a specific connector placed at the van-socket 4/4a with contacts on the phone or also by radiowaves to the phone1 which is provided electronically structured to receive the
25 electronic output/pulses/waves of the electronic stethoscope and to record or to send directly them to a medical center and/or to process them by means an internal software to give a medical comment.

- If the phone has not a software enabled to receive and or process the signals/output of the electronic stethoscope a specific electronic connector to be fixed at the van/socket 4/4a of the phone is provided; the electronic stethoscope will be connected by wire or by radio to said connector and so to the phone .
30 The stethoscope may be of traditional type ,not electronic,so the auscultation headwith bell and diaphragm has its connection rubber tube featured suitable to be connected,during the auscultation,to the microphone included in the phone or to a specific device/connector with microphones to be placed at the van-socket of the phone so the phone by means of it receives the sounds/electric signals of the ausculted organ and then can record,process,transmit/broadcast them ,i.e. to a medical center,hospital
35 or other.

Simply and alternatively a cone shaped receiver is also provided to be fixed solidarized but removable

over the microphone of the phone at one side ,and to be placed over the human chest for auscultation on the other side, the microphone should of high sensitivity type so giving the inside circuit of the phone the possibility to record and /or transmit correctly and with efficacy the heart sounds.

The mobile phone or a PC/note book with phone is provided equipped with an inside included
5 program/software suitable to read/process the trace/figures/values/sounds detected during the checks of blood pressure,heart frequency,electrocardiography control,stethoscope auscultation and to supply a medical comment about them.

The sensors for blood pressure and heart frequency can be provided separate/external as an accessory device to be placed fixed at a van/socket 4/4a or similar vans with electric contacts provided on the
10 phone;this external accessory device including sensors can be also connected to said van-socket 4/4a on the phone by wire.

It should be noted that the phone 1 is provided with the function of digital thermometer to measure the human body temperature and the room temperature by means of suitable sensors/detectors with proper circuit placed in the phone 1 and the values of which will be processed by the internal
15 electronic circuit and shown on the display11;the thermometer can be of traditional type placed inside a van-cavity provided on the phone/battery.

It is provided that the values of blood pressure,heart frequency,electrocardiogram,temperature, can be recorded by the circuit of the phone 1 which will forward them as telephone transmission/message to a receivement point suitable to receive and check them, i.e. a medical station; the values can be also
20 forwarded by the phone 1 directly during the measurement.

As an alternative is it provided that on the phone 1 or on the battery 2 can be made one or more specific van-cavities/hollows 4/4a and 12a in wich said accessory devices/tools as the altimeter-barometer,the hygrometer,the compass and the termometer ,both of mecanical/traditional and electronic-digital type ,can be inserted and fixed, of course beeing suitably and purposely embodied;
25 when theese devices are of electronic-digital type it is provided that in the external cavity-hollow in which they have to be placed ,some electric contacts will be present for powering them and for the connection with the inside circuit od the phone 1 and with the display11.

It should be noted that the barometric functions(barometer,termometer,hygrometer,temperature) provided by the phone 1 according to the present invention can be obtained by means of
30 radiotelephonic signals/messages/sms that the phone is suitably predisposed to call and receive ; the signals/messages comes to the phone by means the cells of the radiomobile network or by specific dedicated radiolinks wich send the value received from metereological stations located on the territory. Moreover in the phone or in the battery is usefully included an electrical resistance suitable to produce heat using the energy of the battery,i.e. to warm one's hands in some occasions or for other purposes.
35 Moreover the mobile phone of the present invention can be provided equipped with an included microwave radiation generator of frequency range similar to that of normal kitchen heating cooking so

the phone can be used as a magnetron to be inserted in special featured little oven, of course this oven having inside the beam divider and other for working as microwave oven.

It is also useful the presence, on the external or internal surface of the phone or between the body of it and its battery or on the battery of informations 15 in relief or low relief or printed indicating lenght
5 measure or international conversion measure.

It is also useful the presence of a traditional pen 10 for occasionally need to write and pullable out from a cavity made in the structure of the phone.

The diffusion of the mobile phone and the high tecnoloy of it make possible that it is a safety instrument in an emergency circumstance; the present invention provides that the phone can generate a

10 particular radio signal(frequency) ,but avove all an evident visible light with its light bulb 3 or a sound,i.e. a siren-alarm ,or a laser beam,or ultrasonics ,for which it will be suitably equipped; the emission of the light or of the sound will be activated by pressing a particular key/switch on the phone in case of serious necessity.

Moreover the phone provides that theese particular emissions of light,siren larm,laser beam,can be
15 activated by a specific remote radio control coming from external source to wich the phone answer automatically, i.e. if called with a predetermined radiofrequency/number ; this is useful in case of people get lost(i.e.if a man is under a snow-slip a dog can hear the ultrasonics,or in open sea) or if an emercy signal is needed to locate.

A further benefit of the phone like the present invention is that it has the answering flip9 made of
20 transparent plastic material and having shape and thicknes in section 18 such that it has a role of magnifying glass,useful to examine some details or to read little letters , it is removable.

The present invention also provides that in the phone is included a little mirror 19 wich can be obtained by metal sheet or suitable varnish or other and i.e. located on the back of the phone or on the not-visible side of the battery, openable like a door,or at the rear of the flip,or featured shaped as a
25 pullable out card.

The phone of the present invention is also provided with the possiblity to dialogue/interacts directly, without passing through the phone network, with an electronic station/detector placed in the house or in the car by radio waves/infrared rays/laser beam working on predetermined frequencies, in order to control some functions of the house or of the car, so acting as remote control,i.e. for opening the door
30 ,the windows,the seat car heating ,the pre heating eventual functions, and many other.

It should be noted that the mobile phonel of this invention is provided suitable to send radiosignals to a little object for personal use 22 equipped with radiowaves receiver apparatus self powered and enabled to receive said radiowaves/signals 26 coming from the phone 1;inside this object a vibrating device22b is placed, like vibracall(little engine with eccentric or other); this personal object equipped
35 with vibrating device is to be placed close to a person or in touch with it if he is in bed ; it can be embodied in various shape ,like ring or wrist bracelet or in other useful shape suitable to be

maintained in touch with the body or very close to it , i.e. at the edge of a pillow or under the pillow,or fixed on the mattress under the body; as soon as said object receives the programmed signal from the phone it puts in action its vibrating device so it becomes a only personal alarmclock and ,very important, noiseless; practically that is to say that in the case of two persons at the same time in bed

5 only one of them will be waked up by the vibration of the said object/alarmclock which is placed with the person that has of course scheduled a predetermined way and timing of putting in action by means the mobile phonel or by other electronic station/device in the house able to send a radiosignal ; the other person in bed will not neither waked up nor disturbed by said vibration that doesn't reaches it.

It is also obviously provided that the apparatus wich emits the predetermined programmed
10 radiowaves/signals can be contained in an object wich is not a mobile phone , it can be an electronic station or an electronic clock,or other, suitably arranged and placed in the house.

It should be noted that in more simple and less expensive way the object /alarmclock 22equipped with internal vibrating device 22b can be placed permanent in bed and furnished with conductor wire 22a connected to it ,thanks to this cable the electric signal will reach the vibrating device wich so will be
15 activated; the other end of the cable will be connected with suitable plug to the van/socket 4 or 4a of the mobile phone 1 predisposed/programmed to gerenate in predetermined way and timing the electric signals wich will put in action the vibrating device 22b of the alarmclock 22 placed in bed with the person ; the cable cancell every need of radioreceiver apparatuses and of the related connector.

20 It is also provided that a cellular mobile phone or a modem device or modem card are connected fixed included in a van/cavity or inside the electronic circuit or if external linked by wire to the body of a portable personal computer/PC/note book/note pad so it becomes a mobile phone too, and said PC/note book will be realized equipped with the above innovative elements/functions as provided by the present invention, that is to say including inside/outside all the various devices provided by the
25 invention ,and said devices can also be provided placed externally as accessories fixed at van/sockets like 4/4a on the PC body,the innovative devices/functions are the same included in the mobile phone of the present invention like barometric station(termometer,barometer,altimeter,hygrometer),the compass,the functions above cited for the heart medicalcontrol(blood pressure, frequency, stethoscope,electrocardiography connection,program/software to give a medical comment),the
30 thermometer,the earphone-microphone placed on a stylus shaped device pullable out from the note-book and hangable on the ear and remaining interacting/radiocommunicated with the PC by radiowaves so permitting to work hands free and to have a normal phone talk at three-one hundred meters far from the PC,the pocket torch 8 to be fixed externally to the note-book or by wire,the noiseless alarm clock 22,the photovoltaic cells 27 on the surface,the scanner and telefax included ,the
35 laser beam apparatus,the tuner, and other above mentioned improvements indicated by the invention.

Is important to note that the phone and the PC/note book including a phone are provided equipped with a specific container bag made of transparent material to permit the passing of the light and so a more frequent powering by the photovoltaic cells that are on the body.

Moreover the mobile phone of this invention is provided with a scanner incorporated in the

5 bodyphone or the scanner is as an external accessory apparatus ,so said scanner works as a sliding brush and is featured suitable to be connected fixed or by wire to the van-socket 4/4a present at the bottom of the mobile phones or at the edge of PC/note book ,the contacts of which are linked with the inside electronic phone circuit/software;the scanner apparatus can also be equipped with own software ;so phone plus scanner can be used to read text/images and then send them to the receiving point.

40 Of course also a PC/note book with phone /modem include can be equipped with a scanner incorporated in it ;the sheet of paper containing the text/images to be scanned is automatically moved trough the lamp/detector scanning photocell apparatus by means of a roller , like for a normal telefax; also the inside a modem can also work as a telefax.

It should be noted that the mobile phone of this invention is moreover provided equipped with a
45 15 device enabled to generate ultra high frequency sound waves, that is to say above twenty thousand hertz, the device can be placed inside the body phone or featured as external accessory self powered or powered by the phone to be occasionally fixed at a van-cavity 4/4a/4c/12a predisposed on the phone or on the battery; this ultrasonic waves generatore can be made button shaped or in many other ways and can be very useful as insect/bug repellent or for calling a dog,or in medicine and other.

20 The mobile phone of this invention moreover includes an infrared radiation based security alarm apparatus suitably featured to detect the passing/moving of a person or animal trough a predetermined area-angle covered by the alarm apparatus, so the detection cell at said passing produces ,by a proper circuit, an electric impulse that will be sent to the circuit -software of the phone /PC/note book to activate an inside the phone alarm ,i.e.like siren or other,or an outside alarm,i.e. radioconnectected
25 with the house security alarm .

The detecting infrared device can be also an external accessory apparatus to be connected fixed or by wire at the van-socket 4/4a/4c of the phone/battery and so ,if necessary, linked to the inside software/circuit of the phone.

It should be noted that the mobile phone of the present invention includes incorporated and connected
30 30 with its electric circuit the AC/DC adapter /battery charger (transformer,rectifier,i.e. of semiconductor type or other,it should be of type not too heavy in total) ;of course the two connection bars 28 placed in the bodyphone/battery are enabled to rotate or sliding towards the outside so they can be inserted into the holes of an electric outlet, u.i.e.220 volts.

The mobile phone of this invention includes also an apparatus suitable to measure the speed og the
35 35 phone compared with the wind or the speed of the wind; this apparatus can be also externally connected as accessory to an external van-socket on the phone; said apparatus measures the speed of

the phone compared with the wind by means of tube/pitot tube in which is placed a sensor of air pressure or there is a little wing which moves according to the pression of the wind and its movement is readed/detected by the inside circuit of the phone thanks to a potentiometer connected to said wing. It should be noted that the mobile phone of the invention is provided with a van-cavity-socket 4/4a
5 with contacts linked to the internal phone circuit/software in which is inserted a sensor/sensing elements suitable to detect if in the vicinity of the phone the air is polluted and dangerous, that is to say that there is presence of smokes ,dust,chemical products,narcotizing products and other; so by the circuit of the phone is possible to read the pollution level and to send an alarm/signal if necessary;also the emitting/detecting laser beam eventually placed in the phone can be used for this aim, to detect the
10 air/atmosphere pollution.

Moreover the mobile phone is equipped with an internal or external temperature sensor connected with the phone suitable to activate automatically the special emergency radiowave frequency . i.e. to call the firemen or to activate the putting out fire actions or to actionning the siren-alarm and light bulb present in the phone;the sensor with proper circuit is also enabled to switch on automatically the phone
15 ,if it is off, when the room temperature reavhes a predetermined dangerous risk of fire level , i.e. 60-100 celsius degrees approx.; practically in total is a fire alarm.

The mobile phone of the present invention provides also that the stylus shaped device like 13a with earphone and microphone and radioconnected with the phone when removed from its container van can be hanged fixed/removable on the earpiece of eyglasses ,so both are suitably featured for this
20 purpose.

Moreover the radioreceiver transmitter apparatus with earphone and microphone working within a distance of 3-100 meters similarly to that placed into the stylus 13a are provided placed incorporated inside the earpiece and/or the frame of the eyeglasses; a little rotating bar with earphone and microphone can also eventually provided to bring the earphone and microphone near the ear and the
25 mouth;but the microphone can also be usefully placed in the lower edge/part of the circular frame which brings the lens so the microphone will be sufficiently near the mouth, consequently only the earphone will be provided included on the earpiece or in a rotating bar fixed to it; a further radioreceiver transmitter apparatus will be obviously provided included in the phone or in an external connector fixed at the van-cavity-socket 4/4a in order to communicate with the radowaves apparatus
30 placed into the eyglasses; so a person wearing this eyglasses can have a normal phone talk hands free and cable free and also far from the bodyphone or from the PC/note book.

It should be noted that the mobile phone of this invention is provided equipped with an electronic photovideorecording camera included in it or attachable to the van-cavity 4/4a as an accessory characterized by the fact that said camera is provided with the function of magnification and/or also
35 field widering of text/images /technical details in order to read clearly them on the phone display, so working if necessary as a substitute of the eyglasses or similarly to a magnifying binocular.

Said camera can be also technically equipped with sensors able to see/take images-pictures in darkness beeing equipped with infrared radiation based detecting apparatus; this can be useful for personal safety and security or for looking people or animals in the night and other.

It is important to note that many people plays a guitar or a piano or other instrument so it is necessary

- 5 to tune up said instruments; the mobile phone of this invention can achieve this need because it is provided equipped ,inside its electronic circuit /software , with a tuner and so the correct tuning up, i.e. of a guitar/piano strings or of a flute or other , will be seen and controlled and so achieved by means the phone display on which there will be shown the suitable indications, i.e if it is necessary to slacken or to strecht a string the sounds/electric pulses of an electric musical instrument will reach
- 10 directly by cable the phone circuit /software with tuner function through the van with contacts at the bottom of the phone ,while the sounds of an only acoustic musical instrument will reach the phone circuit with tuner by means the microphone of the phone placed near the instrument or in contact with it; moreover in addition ,by pressing speecific keys on the keyboard the phone will generate at its earphone the basic notes of the scala in a way similar to a diapason.
- 15 It should be noted that the mobile phone of this invention and/or its battery can be be provided equipped with some external/internal vans-cavities-slits-slots including electric contacts to link them to the phone circuit/software and said vans-cavities-slots featured to contain, as accessory, one or more than one electronic cards including a program/software, may be featured similarly to normal phone cards, so when inserted in the slot they permit to personalize the phone giving it new particular
- 20 additional functions and/or giving the possibility to operate in arrangement with devices-sensors to be added,as accessory, to the bodyphone or battery, as provided by the present invention.

Although the present invention has been explained in relation to the preferred embodiments, it is to be understood that many other possible modifications and variations can be made departing from the spirit and scope of the invention as hereinafter claimed.

CLAIMS

- 1.Radio mobile portable phone apparatus like a cellular or a household cordless or a receiving-transmitter set characterized by the fact that on the structure of the bodyphone or of its battery one or more than one opening-van-cavity-cleft-slot are provided,open or openable to the outside,having function of electric socket /outlet and/or of connection point with the internal electronic/electrical circuit of the phone and of the battery and so also with the software and function of container cavity for accessories or sensors;said opening/van/cleft/cavity contains some electric contacts to which by means of a circuit of connection and by the keys for switching on-off and for functions control placed in the phone/battery will come the electric power of the battery and the signals/controls/pulses sent by the keys but also it is an access point for the signals/electrical pulses
- 5 coming from external accessories/sensors placed in the vans-cavities and directed to the internal circuit/software of the phone for processing/operations;the above van/cavity can be the normal van with contacts always present on the bottom of the mobile phones,that is to say where is fixed the plug of the battery charger/AC-DC adapter and other, or can be one or more specific additional van/cavities provided made externally on the phone or on the battery and equipped with internal electric contacts
- 10 connected with the internal electric/electronic circuit and/or with the software of the phone or of the battery;said additional van/cavity,one or more than one, can be featured shaped suitably to contain solidarized sensors and/or other accessory devices; moreover the van-cavity-hollow can be without electric connection contacts ,so it will be used only to simply insert/solidarize to the body phone some self powered accessories.
- 15 2.The mobile phone defined in claim 1 wherein said van-cavity is provided suitably featured to contain fixed into it ,i.e. by pressure or screwing or joining,a lighting bulb/lamp similar to the types present in the little pocket torches and in such a way that the electric contacts of the bulb will meet the contacts/socket present inside the van-cavity suitably featured to enable the bulb/lamp lighting.
- 20 3.The mobile phone like defined in claim 1, wherein a bulb light/lamp for illumination is placed fixed-solidarized but removable for replacement inside the van- cavity carried out in the mobile phone structure or in that of its battery ; the light bulb is similar to that normally present in the little pocket medium-sized torches such of the type halogen,incandescence,kripton and suitable to produce a flood light similar to said torches.
- 25 4.The mobile phone like defined in claim 1 wherein it is provided equipped with an external separated electric torch to be fixed by pressure or screwing or other at the van-cavity that contains the electric contacts to which comes the energy power of the battery ,said external accessory torch is provided equipped with own light-bulb but lacking of own powering battery; moreover said external torch is also provided connected by wire and plug to the van-cavity/electric outlet so permitting its powering and its use also away from the phone,that is to say not fixed to it.

- 5.The mobile phone defined in claim 1 wherein its antenna and the parts of the electronic circuit which emits radiated energy/waves electromagnetic are placed at the opposite side if compared to that which includes the earphone for hearing, that is to say towards the bottom of the phone; it is so very much reduced the entity of radiated energy which reaches the user's head ; also the phone parts /components
5 which emits radiated energy in high quantity will be at the maximum shielded on the side towards the head in order to minimize their emission towards the user's head, particularly the earphone and its links will have to be substantially free from it by means of a suitable separation/shielding/filtering from the remaining of the circuit.
- 6.The mobile phone defined in claim 1 wherein the presence of electric powering at the contacts placed
10 inside the opening-van-cavity and so the switching on-off/control of the light bulb/illumination is obtained by means the own keys of the phone placed on the keyboard or from the side of it or by specific keys placed externally on the phone or on the battery or on the external accessory torch fixed at the van.
- 7.The mobile phone defined in claim 1 characterized by the fact that the external surface of the phone
15 or of the battery is equipped with photovoltaic cells /solar panel to contribute to the powering/charging of the battery; also a separated modul/panel with cells can be provided ,suitably featured as an accessory to be fixed solidarized outside on the bodyphone or on the battery and obviously electrically linked to the phone/battery circuit by means some specific van-cavities with contacts provided on the body phone;the solar panel can have the shape of a card insertable/pullable out in/from a suitable
20 van-cavity provided in side or outside the phone or battery.
- 8.The mobile phone like defined in claim 1 wherein inside the circuit/software is included integrated an electronic-digital compass for orientation, the indications-figures of which can be seen on the display of the phone ;alternatively the compass is both electronic-digital or of traditional-mecanical type but separately carried out and to be fixed in a specific suitable van-cavity-hollow provided
25 externally on the phone and also equipped with electrical contacts to connect said compass,if it is of digital type , with the circuit of the phone;the compass can be also of digital type and separately carried out and fixed to the phone at its usual socket/connection point ,normally located at the lower edge of the phone,so linked to the circuit.
- The phone compass have to be provided adjusted/adjustable to eliminate or correct the disturbs
30 coming possibly from the structure of the phone and during phone communication; i.e. the phone/activity can be momentaneously stopped if the compass works.
- 9.The mobile phone like defined in claim 1 wherein in the structure of the phone or of the battery is inserted,in a container cavity ,a traditional pen to write, pullable from said cavity and replaceable in it.
- 10.The mobile phone like defined in claim 1 wherein the earphone is placed at the top of a mobile
35 bearing bar sliding inside and outside for one-six centimeters at the upper edge of the phone and remaining electrically connected with the phone circuit,the way in and way out from the body can have

- function of opening/closing communication and can be automatic and automatized by driving power/engine at the opening of the communication or by specific key
11. The mobile phone like defined in claim 1 wherein the phone provides that, by pressing one or more specific switches/keys of it or of its battery it is possible to have the immediate lighting up of the light bulb/lamp for illumination ,and/or the laser beam apparatus, in a continuous/intermittent or other predetermined way and/or the activation of a loud resounding signal like siren of 60-110 decibel and/or the emission of a predetermined radiowave/frequency ; said lighting of the bulb ,resounding signal and emission of a special frequency and/or laser beam emission will indicate a particular situation ,i.e.danger, for the holder of the phone.
12. The mobile phone like claimed in claim 1-11 wherein it is equipped with a siren emitting a loud resounding signal equal approx to 60-110 decibel, placed inside the phone or in a van-cavity on it.
13. The mobile phone like in the claim 11 wherein said emergency radiosignal/frequency/laser beam can be emitted/modulated with such particular characteristic ,i.e. a predetermined special frequency,to reach immediately a predetermined reception point; so this point/station recognizes said special frequency and consequently activates the taking action operations, like the location and so on.
14. The mobile phone like defined in claim 1 wherein the emission of light from the bulb or sound from the siren-alarm or the predetermined emergency radiofrequency or the laser beam emission or the ultrasonics will be automatically self putted in action when some predetermined programmed specific radio frequencies reach the phone and to which it is prepared/programmed to answer/reacts in the above said ways, this is useful to facilitate the precise location on the territory ,if necessary.
15. The mobile phone like claimed in claim 1 wherein it is equipped with a little mirror for ladies,i.e. located at the back rear of the bodyphone or between body and battery or on the flip or on the not visible sides of the battery/body phone, so the battery can also purposely be openable like a door; moreover the mirror can be in the shape of pullable out card,replaceable in the body phone.
16. The phone is also provided equipped with an separate mirror to be fixed solidarized as accessory into a van on the surface of the body/battery.
17. The mobile phone like claimed in claim 1 wherein it is provided with function of barometer ,altimeter,hygrometer, and including the related sensors/sensing devices for the atmosferic pressure and humidity level; said barometer ,altimeter,hygrometer will be of digital-electronic type and its circuit will be integrated in that of the phone so showing the figures-values and related diagrams/weather forecasts on the phone display;it is alternatively provided that on the body of the phone or of the battery there are one or more cavities-hollows in which can be inserted-solidarized said barometer-altimeter-hygrometer suitably purposely embodied which can be of traditional/mechanical or electronic type; if said barometer/altimeter and hygrometer are of electronic-digital type in the external cavity-hollow in which they should be placed some electric

contacts could be present for powering them and for the connection with the inside circuit of the phone.

Said altimeter-hygrometer-barometer can also be made as separated accessory and suitable to be fixed externally at the van/socket with electric contacts always existing at lower edge of the mobile phones.

- 5 17. The mobile phone like claimed in claim 1 wherein it is provided with the function of digital thermometer in order to measure the human body temperature and the room temperature by means of said suitable detecting sensors placed in the phone internally and/or externally, i.e. with inside thermistore or termocouple or other sensing element plus a proper circuit; the detected values supplied by the sensors will be processed by the internal circuit of the phone and showed on the phone display;
- 10 18. said thermometer can be embodied in a shape of external object to be placed into a cavity/hollow made on the body of the phone or of the battery or in a van/socket provided on the bodyphone and in which can be also eventually present some electric contacts for powering and for the connection with the internal circuit of the phone.

The thermometer can also be in the shape of external accessory to be fixed at the van/socket always present at the lower edge of the mobile phones and so powered and connected with the phone circuit.

15 19. The thermometer can be of traditional type ,not digital, to be placed in a van-cavity provided in the body phone.

- 20 18. The mobile phone like a cellular phone characterized by the fact that the flip for protecting the keyboard or for opening/closing the communication includes the earphone for hearing ,so increasing the distance between the user's head and the parts of the phone which emits radiated energy/electromagnetic waves;the earphone is placed towards the top, near the upper edge of the flip and will be electrically connected with the internal circuit of the phone,also in the joining/rotation/sliding point of the flip; said flip is also provided enabled to horizzontally rotate,not vertically, at the opening of the communication.

- 25 19. The mobile phone like a cellular phone carachterized by the fact that the earphone for hearing and the microphone are placed both in a single piece structure stylus/bar shaped which is pullable out from a container van/cavity made on the phone and is replaceble in it; said stylus shaped bar including microphone and earphone is provided featured to be hanged up on the ear for hands free communication, and can interact/communicate with the phone within a distance approximately equal to 30 five/one hundred meters by means of a own self powered radiowaves receiver-transmitter apparatus included in it which interacts with the phone thanks to a further similar radiowaves receiver-transmitter apparatus included in the internal electronic circuit of the phone or placed on it but externally at a van/socket as separate radioconnector device;said stylus-bar shaped radio receiving-transmitting apparatus with microphone-earphone is equipped with external electric contacts to remain linked with 35 the electronic circuit of the phone so maintaining its earphone and microphone active/functionning

when replaced inside its container van-cavity in the phone, so also recharging its power supply battery receiving energy from the battery phone; it is equipped with switch on/off/control key plus light alarm.

20. The mobile phone like claimed in the claims 1-19 wherein the removable radio receiving-transmitter stylus shaped earphone-microphone may be in number of one or two pieces to give two people the possibility to hear and speak also contemporary, and moreover to give a single person the possibility

5 to hear stereosound; one or two can also be the related containing van-cavities in the phone.

Moreover said stylus shaped device including earphone and microphone can be in a number of more than two accessory pieces in order to give more people the possibility to communicate contemporary with the phone and between themselves being connected with the phone.

10 21. The mobile phone like a cellular phone and like defined in claim 18 wherein the keyboard protection and/or opening communication flip is provided unookable from the phone and it is equipped with an earphone, a microphone and an own radio receiver-transmitter apparatus self powered with own battery and enabled to interact/radiocommunicate with the circuit of the phone until a distance of three-one hundred meters approximately by means a similar radio receiver-transmitter apparatus

15 placed inside the phone circuit or featured as external connector to be fixed at a van/socket of the phone and it is obviously equipped with an hooking/fixing system to the body phone suitable to maintain the connection with the other part of the phone ,practically the two parts have to remain electrically connected .

The unookable flip or semipart of phone with earphone and microphone can also be provided

20 including the board with the function keys and the display to give the user the possibility to make normally a phone call far from the other semipart which includes the phone components emitting radiated energy, like the antenna apparatus and other ; obviously both semiparts of the phone will include a radio receiver-transmitter apparatus to maintain the communication/connection between them; so the semipart including the antenna apparatus can usefully remain separated, i.e in a bag or in other 25 room or in a suitcase, that is to say far from the semipart with earphone-microphone and keyboard and display which is in the hands of the person.The flip can be eventually equipped with photovoltaic cells on the surface for its powering.

22. The mobile phone like claim 1-18-21 wherein the unookable flip including earphone, microphone and the receiver-transmitter apparatus to interact with the body phone which also includes the radio

30 receiver-transmitter apparatus is provided featured in shape and dimensions suitable to permit to hang up it on the user's ear instead of to be holded in the hands ..

23. The mobile phone like a cellular phone characterized by the fact that the flip is cover shaped sliding over the body phone or at its rear side and it includes the earphone and it is placed in the upper part of the phone; it moves on way/runners which maintain it connected with the circuit of the phone and at

35 the opening of the communication it moves upwards so emerging from the upper edge of the bodyphone;said sliding flip/cover can be also provided removable/unookable from the phone but

remaining interacting/communicating by radiowaves apparatus with it , within 3-100 meters appr.and includes both earphone and microphone ,keyboard and display .

24.The mobile phone like claimed in claim 1 wherein in a van-cavity made on the phone an apparatus emitting a laser beam is provided ,that is to say to generate coherent light,moreover said laser beam

5 emission can be also controlled / modulated by the electronic circuit/software of the phone;the phone could be also featured to connect said laser beam to an optical fibers based communication apparatus and moreover said laser beam apparatus can be provided suitable to made measures of distance or depth and of the pollution air level..

25.The mobile phone like claimed in claim 1 wherein the cover keyboard or opening/closing

10 communication flip is provided made of transparent plastic material and having shape and thickness in section such that it has a role of magnifyng glass/lens , it is also evntually removable from the phone.

26. The mobile phone like claimed in claim 1 wherein it is provided with a function suitable to give it the possibility to operate directly , not passing trough the telephone network, as remote control for the car ,that is to say that by means of infrared rays or radiowaves or laser beam it can interact/dialogue at

15 a certain distance with a detector cell/electronic station placed in the car, i.e.for closing doors,windows,heating activation and so on.

27.The mobile phone like claimed in claim 1 wherein it is provided with a function suitable to give it the possibility to interact directly ,not passing trough the telephone network,with the closure system of the door's home that is to say for the opening of the door or for interacting with an electronic station

20 placed at home and enabled to put in action/control household activities, i.e. closures,room temperature , turning off the oven,safety, and so on; everything by means a radiowaves/infrared/laser beam receiver- transmitter apparatus in the phone and the related connector/electronic station placed in the house.

28.The mobile phone like claimed in claim 1 wherein it is equipped with some included

25 sensors/sensing devices suitable to detect/measure the blood pressure value and the heart frequency of a person, moreover the phone is provided an external van-cavity-socket with electric contacts to which connect the plug/cable of a separate electrocardiografy apparatus.Also the phone can be inside equipped with a function/software suitable to read-process the trace/figures/values detected by the above said sensors and by the electrocardiography and to supply a self generated medical comment

30 about them.

The electrocardiografy apparatus can be a chest belt also radiolinked to the phone or to a radio connector placed at van/socket of the phone 1 ,so the phone can also work as an holter,which means enabled to record the trace of the electrocardiography for many hours.

The sensors for blood pressure and heart frequency can be provided separate/external as an accessory

35 but placeble in a suitable van-cavity-socket with electric contacts on the body phone so ,when fixed in it,they can operate beeing connected with the inside circuit/software of the phone.The sensors can be

external not fixed solidarized but connected to the van-cavity and so to the inside circuit of the phone by wire.

- 29.The mobile phone like claimed in claim 1 wherein it is provided enabled to send radiofrequencies/signals to a receiving object electrically selfpowered in wich it is included a
5 vibrating device , i.e. engine with eccentric or other; said object have to be placed close to a person or in touch with it and also can be made having shape of watch,bracelet,ring, and in other embodiment useful to maintain it in touch with the human body; said object includes a vibrating device and is equipped with a radioreceiver apparatus so it is enabled to receive and amplify the programmed radiosignal generated by the phone,said signal will activate the vibrating device so creating an only
10 personal alarm clock, that is to say that i.e. in the case of two people in bed only one will be waked up by the signal/vibration so without to disturbe the other one.
- 30.The mobile phone like claimed in claim 16-17 wherein the values of barometric station,that is to say temperature,humidity,pressure,weather forecasts, can be achieved by the phone by means of radio signals/messages/sms requested/transmitted to/from the radiomobile network or by specific dedicated
15 radiolinks which send the value/figures/forecasts received from local metereological stations located on the territory which are continuously operating.
- 31.The mobile phone like claimed in claim 28-40 wherein the detected values of temperature,blood pressure,heartfrequency ,electrocardiogram ,stethoscope sounds measured by means of the internal or external sensors can be recorded by the phone which is enabled to forward them as telephonic
20 message/transmission to a reception point enabled to check and process them, i.e. a medical station; the values/figures can also be forwarded by the phone directly during its measurement.
- 32.The mobile phone like claimed in claim 1-17-13-12 wherein it is provided equipped with an internal or external temperature sensor with proper circuit included/connected with the phone circuit and suitable to activate a siren alarm or a specifcl radio frequency emission when teh room
25 temperature reaches a predetermined dangerous level,i.e. to call automatically the firemen or other; the sensor with proper circuit will be also enabled to switch on the phone at said dangerous level;
- 33.The mobile phone like a cellular phone or a modem apparatus or modem card are connected/included fixed in a van/cavity or inside the electronic circuit or by wire to the body of a portable personal computer/PC/note book/note pad so it becomes a mobile/portable telephone
30 too,carachterized by the fact that it will be provided including the above and below indicated innovative elements/functions/devices of the present invention, that is to say with the van for a bulb,the bulb, ,the barometric station,the compass,the heart frequencymeter, the sfyngomanometer, the stethoscope,the van/socket to link the wire/plug of an electrocardiogram apparatus,an internal program/software to supply a comment/check-up according to the detected medical values/figures
35 regarding the heart,the noiseless alarm clock, the thermometer,the earphone -microphone placed on a stylus shaped device to be hanged on the ear and pullable out from a van in tha PC body and

replaceable into it in a specific van and radioconnected with the PC by suitable radiocnnection apparatuses placed in the stylus and in the PC, so permitting the hands-free phone communication working at the PC, the fotovoltaic cells/solar panel on the external surface for powering the battery, the scanner, the telefax, the tuner, some vans/sockets to which connect the innovative devices of the present invention, and every other innovative function indicated in the above and below listed claims.

- 5 34. The mobile phone like claimed in claim 7-28 wherein the phone or PC/note book/note pad with photovoltaic cells/solar panel are provided with a specific container bag made of transparent material to permit a more frequent and efficient powering by the cells.
- 10 35. The mobile phone like claimed in claim 1 wherein the phone or the battery is provided with an internal heating element like an electrical resistance or other device suitable to produce heat; the heating element can be an external apparatus powered by the energy of the battery phone.
36. The mobile phone like claimed in claim 1 wherein the phone is provided with a microwave generator of radiation range similar to that of a normal kitchen heating-cooking oven and the phone is featured to be inserted in it suitably predisposed, as a little magnetron.
- 15 37. The mobile phone like claimed in claim 1-3 wherein over the van-cavity containing the bulb a moving lens/glass also coloured if necessary is placed in order to give a light pointer arrow shaped.
38. The mobile phone like claimed in claim 1-33 wherein the phone is provided with a scanner with own lamp and photocell and proper circuit, incorporated in the body phone or the scanner is as an external accessory apparatus, so said scanner works as a sliding brush and is featured suitable to be connected fixed or by wire to the van/socket with contacts normally present on the mobile phones and so with the internal circuit and software of the phone; the software for the scanning can be included in the software/circuit of the phone or the external scanner apparatus is provided with an own software; so the phone plus scanner can be used as a reader of text or figures and then send them through the network to a receiving point.
- 20 25. Of course also a PC/note book/note pad with phone/modem included can be equipped with a scanner incorporated in it, that is to say including a lamp, photocell and other; the sheet of paper containing the text/figure to be scanned is automatically moved through the lamp/detector scanning photocell apparatus by means of a roller, like for a normal telefax; of course the pc/note book having inside a modem can also work as telefax.
- 30 39. The mobile phone like claimed in claim 1 wherein it includes an infrared radiation based apparatus alarm equipped suitably to detect the passing/moving of a person or animal or object through the predetermined area/angle covered by the apparatus, so this passing produces, by a proper circuit, an electric impulse which will be sent to the circuit/software of the phone/PC to activate an inside or outside alarm, i.e the siren or a predetermined radiofrequency emission.
35. The detecting infrared radiation device/alarm can be also an external accessory apparatus to be connected to the inside phone circuit/software by fixing it at a van/socket/cavity on the phone or PC.

40.The mobile phone like claimed in claim 1 wherein the phone includes incorporated and connected to its circuit/software the battery charger (AC/DC transformer,rectifier,i.e. of semiconductor type or other),of course having the two connection bars placed in the body phone enabled to rotate or sliding towards the outside so saidbars can be inserted into the holes of an electric outlet,i.e. 220 volts.

- 5 41.The mobile phone like claimed in claim 1 wherein the phone includes an apparatus made suitable to measure the speed of the phone compared with the wind or the speed of the wind; this apparatus can be also externally connected as accessory to an external van/socket on the phone.

The apparatus measures the speed of the phone compared with the wind by means of a tube/pitot tube in which is placed a sensor of air pressure electronically connected or a little wing which moves
10 according to the speed of the phone or of the wind and its movement is readed by the inside circuit/software of the phone thanks to a potentiometer connected to the wing.

- 42.The mobile phone like claimed in claim 1-19-20-21-23 provided with a separate/external radio receiver-transmitter self powered apparatus,i.e. stylus /bar or flip shaped, which is equipped enabled to radiocommunicate with the inside phone electronic circuit by means of a radio connection circuit placed
15 inside itself and inside the phone circuit or by a radioconnector placed externally linked/attached at a van-socket on the phone;said apparatus can be as separate object or can be featured placeable/removable in/from the body phone and is characterized by the fact that it is moreover provided enabled to have intercommunication function between itself and the phone when remaining separated/outside the bodyphone;that is to say that it is possible to maintain opened the communication
20 between the removable apparatus and the phone on a predetermined separate channel radio different from the mobile network telephonic freqency used normally and contemporary the phone remain active as normal telephone connected to the network,so giving the person that has the phone in the hands the possibility to hear the sounds existing in the vicinity of the apparatus when it lies outside its van-cavity and also away from the bodyphone .This apparatus is equipped with key for switching
25 on/off and for activating the intercommunication channel; i.e.it can be placed in the room of a child to hear if the child cries and also giving the person with the phone, situated in other room, the possibility to have a normal phone communication using normally the mobile phone in the telefonic network.

The phone has to be provided equipped with a fixed microphone and earphone/loudspeaker or alternatively equipped with two included or separated but attachable receiving-transmitter apparatuses .

- 30 43.The mobile phone like claimed in claim 42 characterized by the fact that the radiocommuted intercommunicating apparatus is featured equipped only with earphone/louspaker and without microphone and consequently without the transmitter radiocircuit,moreover it is provided made suitable to be fixed at the collar of a dog so enabling the calling/controlling of it by means of vocal orders,heard by the dog through the earphone,sent by the dog owner with the related mobile phone
35 radioconnected with the apparatus.

44. The mobile phone like claimed in claim 1 wherein it is provided a van-cavity equipped with internal electric contacts linked with the internal circuit/software of the phone in which is inserted a sensor /sensing elements suitable to detect if in the vicinity of the phone the air is polluted and dangerous ,that is to say the presence in excess of smoke, dust,chemical products,narcotizinz products and other.

5 so by the circuit/software of the phone is possible to send an alarm/signal and to read the pollution level;also the emitting/receiving laser beam apparatus can be used for this purpose,to detect the presence of pollution in the air/atmosphere.

45. The phone like claimed in claim 1 wherein it is provided featured to be connected to a stethoscope for auscultation;the bell plus diaphragm of the stethoscope can be electronically structured having a

40 sound detector/microphone and eventually a powering apparatus to amplify the signal and so on, this means that the sounds of the ausculted organ are converted into electric pulses which can be transmitted directly by plug/cable or by a specific connector placed to the van/socket with contacts or also by radiowaves to the telephone which is provided electronically structured to receive the electric output/signals of the electronic stethoscope and to record or to send directly them to a medical center
45 and/or to process them by means of an internal software featured to give a medical comment.

If the phone is not electronically featured to receive and/or process the signals/output of the electronic stethoscope a specific electronic connector to be fixed at the van/socket of the phone is provided ;the electronic stethoscope will be so connected by cable or by radio to this connector and by means of it to the phone ; the stethoscope may be of traditional type ,not electronic, so the auscultation head with bell and diaphragm has its connection rubber tube featured suitable to be connected,during the auscultation,to the microphone included in the phone or to a specific device connector with microphone to be placed at the van/socket of the phone so the phone by means of it receives the sounds/electric signal of the ausculted organ and then can record,process, transmit/broadcast them i.e to a medical center/hospital or other.

25 A cone-shaped receiver is also provided to be fixed solidarized, but removable, over the microphone at one side and to be placed over the human chest for auscultation on the other side, the microphone should of high sensitivity type so giving the inside circuit of the phone, the possibility to record and/or transmit correctly and with efficacy the heart sounds during the auscultation.

46. The mobile phone like claimed in claim 1-19 wherein the stylus/bar shaped device radioconnected
30 with the phone when removed from its container van in the phone and equipped with own earphone and microphone is featured suitable to be fixed hanged on the earpiece of eyglasses and to rotate for having the earphone placed at the ear and the mocrophone near the mouth.

47. The mobile phone like claimed in claim 1-19 wherein a radio receiver-transmitter electronic apparatus working within a distance of 3-100 mt approx. plus earphone and microphone are provided
35 placed incorporated inside the earpiece and/or the frame of the eyglasses; a little rotating bar with earphone and/or also microphone fixed on the frame/earpiece can be also eventually provided to

bring the earphone and/or the microphone near the ear and mouth ; the microphone can also be placed in the lower edge/part of the circular frame which bring the lens ;a further similar radio receiver-transmitter apparatus enabled to interact-communicate with the radioreceiver-transmitter apparatus placed inside the eyeglasses have to be provided and placed included in the phone circuit or

5 it can be featured as external accessory connector to be fixed at a van-cavity with electric contacts on the phone; the person wearing the radio communicating eyeglasses can have a normal phone communication hands free and cable free and also far from the body phone or from the PC but connected with them.

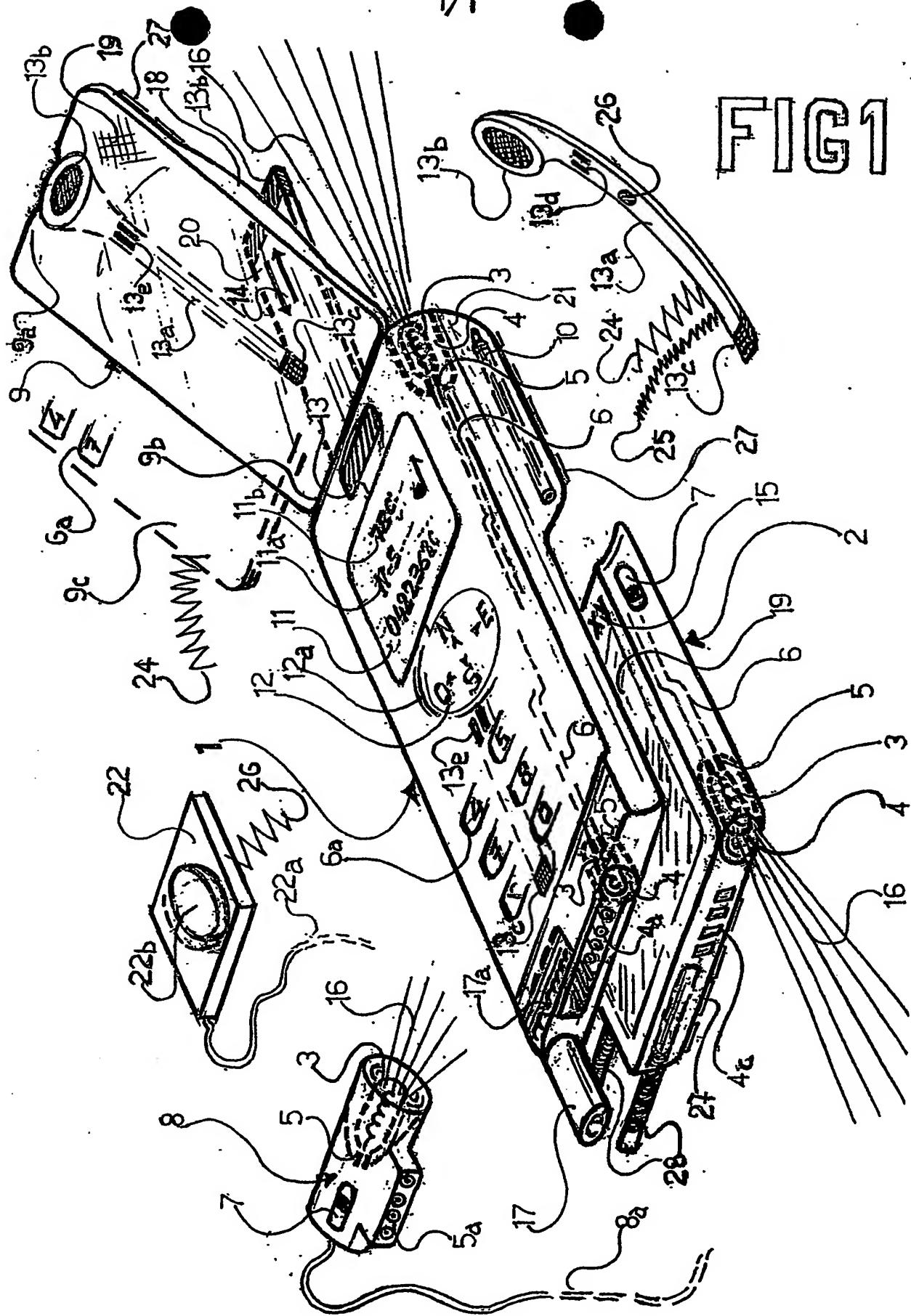
48.The mobile phone like a cellular phone provided equipped with an electronic photo-videorecording
10 camera included in it or attachable to it at the van-cavity as accessory characterized in that said camera has the function to give magnification and/or also field widening of text/images/technical details in order to read clearly them on the phone display ,so working as a substitute of the eyeglasses or similarly to a binocular; moreover said photocamera is provided enabled to take images-pictures in darkness bbeing also equipped with infrared radiation based detection cells.

15 49.The mobile phone like claimed in claim 1 wherein the phone includes inside its structure or fixed externally at a van-cavity a device suitable to generate ultra high frequency sound waves, that is to say in the range over twenty thousand hertz; the ultrasonic waves can be used in many ways; i.e. they usefully are an insect/bug repellent like the ticks and other, or can be used to call the dog,or in diagnostic medicine and other.

20 50.The mobile phone like cellular or cordless carachterized by the fact that its electronic circuit/software includes a tuner with the proper circuit ; the correct tuning up, i.e of the guitar/piano strings or of a flute or other,will be seen and controlled and so achieved by means the phone display on which there will be shown the suitable indications ;the sounds/electric pulses of an electric musical instrument will reach directly by cable the phone circuit/software with tuner through the van with
25 contacts at bottom of the phone , while the sounds of an acoustic musical instruments will reach the phone circuit/tuner by means the microphone of the phone placed near the instrument or in contact with it; the phone also provides that by pressing some special keys it will also give the basic notes of a scala in intensity and way similarly to a diapason.

51.The mobile phone of cellular type with its battery characterized in that both can be provided with
30 external/internal vans-cavities-slots with contacts connected with the phone circuit/software,featured to contain,as external/internal accessory,one or more than one electronic cards which includes an additional program/software suitable to personalize the phone ,also in arrangement with devices,sensors,functions provided by the invention;the phone could also receive this new programs/software for the innovative functions of the present invention by means of internet /web.

FIG 1



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